

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for battery state identification for a motor vehicle, having the following steps:

(S1) measurement of a voltage of a motor vehicle battery (5) during the starting process of a motor vehicle over a predetermined time period,

(S2) determination of a minimum voltage level of the motor vehicle battery (5) during the predetermined time period of the measurement process,

(S3-1 to S3-3; S3-0 to S3-3*) assessment of a state of charge of the motor vehicle battery (5) on the basis of the determined minimum voltage level,

(S4-1 to S4-3) control of a generator as a function of the assessment of the state of charge of the motor vehicle battery (5), so as to ensure an adequate supply for the vehicle power supply system and adequate charging of the motor vehicle battery (5), while at the same time optimizing the fuel consumption and the emissions.

2. (Original) The method as claimed in claim 1, characterized in that (S5) the result of the assessment is output to a vehicle user.

3. (Currently Amended) The method as claimed in claim 1 ~~or~~ 2, characterized in that the assessment of the state of charge in steps S3-1 to S3-3 is carried out by association of the minimum voltage level with one of at least two predetermined state of charge ranges.

4. (Original) The method as claimed in claim 3, characterized in that three predetermined state of charge ranges (BZ1, BZ2, BZ3) are formed, and are defined by two threshold values (V1, V2).

5. (Original) The method as claimed in claim 3, characterized in that the three predetermined state of charge ranges are the "very powerful" (BZ1), "powerful" (BZ2) and "restricted power" (BZ3) states of charge.

6. (Currently Amended) The method as claimed in ~~one of~~ claims 2 to 5, characterized in that the result of the assessment in step S5 is output visually.

7. (Currently Amended) The method as claimed in claim 5, characterized in that

(S5) the result of the assessment is output to a vehicle user, and
the result of the assessment in step S5 is produced visually in the form of different colors for the three states of charge "restricted power" (BZ3), "powerful" (BZ2) and "very powerful" (BZ1).

8. (Currently Amended) The method as claimed in ~~one of~~ claims 1 to 7, characterized in that,

in step S4-3, a nominal value of the charging voltage is predetermined for a normal charging level for an unlimited time for the generator (4) for a state of charge is "restricted power" (BZ3),

in step S4-2, a nominal value of the charge voltage for engine load reduction, followed by the nominal value of the charging voltage for the normal charging level are predetermined for a predetermined time period for the generator (4) for a "powerful" (BZ2) state of charge,

in step S4-1, the nominal value of the charging voltage is predetermined for the value for engine load reduction, followed by a reduced vehicle power supply system level and then a recuperation level over a predetermined time period for the generator (4) for a "very powerful" (BZ1) state of charge.

9. (Currently Amended) The method as claimed in ~~one of~~ claims 1 to 7, characterized in that, in steps S4-1 to S4-3, the generator is controlled as a function of the assessment of the state of charge of the motor vehicle battery (5) and of at least one further parameter in the steps S3-0 to S3-3*, in order to ensure adequate charging of the motor vehicle battery (5), and at the same time to optimize the fuel consumption and the emissions.

10. (Original) The method as claimed in claim 9, characterized in that the at least one further parameter is the ambient temperature (T).

11. (Original) The method as claimed in claim 10, characterized in that, in step S4-3, a nominal value for the charging voltage for the normal charge level is predetermined for an unlimited time, irrespective of the temperature, for the generator (4) irrespective of the assessed state of charge for a temperature below a first temperature threshold value (Ts1) (step S3-0) and for a "restricted power" (BZ3) state of charge (step S3-1*),

in step S4-2, a nominal value of the charging voltage for engine load reduction, followed by the nominal value of the charging voltage for the normal charge level are predetermined over a predetermined time period for the generator (4) for a "powerful" (BZ2) state of charge (step S3-2*) and a temperature above the first temperature threshold value (Ts1) (step S3-0),

in step S4-1 the nominal value of the charging voltage for engine load reduction is predetermined for a predetermined time period, after which a nominal value of the charging voltage for a reduced vehicle power supply system level, followed by a nominal value of the charging voltage for the recuperation level are predetermined for a predetermined time period for the generator (4) for a "very powerful" (BZ1) state of charge (step S3-1*) and a temperature above the first temperature threshold value (Ts1) (step S3-0) and below a second temperature threshold value (Ts2) (step S3-1*), and

in step S4-3, the nominal value of the charging voltage is predetermined for

the normal charging level for an unlimited time for the generator (4) for a "very powerful" (BZ1) state of charge and a temperature above the second temperature threshold value (Ts2) (step S3-3*).

12. (Original) The method as claimed in claim 11, characterized in that the first temperature threshold value (Ts1) is 0°C, and the second temperature threshold value (Ts2) is 25°C.

13. (Original) An apparatus for battery state identification for a motor vehicle, having:

a device (8) for measurement of a voltage of a motor vehicle battery (5) during the starting process of a motor vehicle over a predetermined time period,

a device (7) for determination of a minimum level of the motor vehicle battery (5) during the predetermined time period of the measurement process,

a device (7) for assessment of a state of charge of the motor vehicle battery (5) on the basis of the determined minimum voltage level, and

a device (7) for controlling a generator (4) as a function of the assessment of the state of charge of the motor vehicle battery (5) in such a way that an adequate supply is ensured for the vehicle power supply system and adequate charging of the motor vehicle battery (5) is ensured, with the fuel consumption and the emissions being optimized at the same time.

14. (Original) The apparatus as claimed in claim 13, characterized in that a display device is provided, on which the state of charge is displayed to the vehicle user (as determined by the device (7), for assessment of the state of charge of the motor vehicle battery (5)) in different colors for each state of charge.

15. (Currently Amended) The apparatus as claimed in claim 13 ~~or 14~~, characterized in that the device (7) for controlling the generator (4)

- predetermines a nominal value of the charging voltage for a normal charging level for an unlimited time for the generator (4) when the state of charge is "restricted power" (BZ3),
- predetermines a nominal value of the charging voltage for engine load reduction, followed by the nominal value of the charging voltage for the normal charging level for a predetermined time period for the generator (4) for a "powerful" (BZ2) state of charge,
- predetermines the nominal value of the charging voltage for the value for engine load reduction, followed by a reduced vehicle power supply system level and then a recuperation level over a predetermined time period for the generator (4) for a "very powerful" (BZ1) state of charge.

16. (Currently Amended) The apparatus as claimed in claim 13 ~~or 14~~, characterized in that
in addition, a device (9) is provided for measurement of the ambient temperature, whose measurement result is taken into account by the device (7) for controlling the generator (4), in addition to the result of the assessment of the state of charge.

17. (Original) The apparatus as claimed in claim 16, characterized in that the device (7) for controlling the generator

- predetermines a nominal value of the charging voltage for the normal charging level for an unlimited time, irrespective of the temperature, for the generator irrespective of the assessed state of charge for a temperature below a first temperature threshold value (Ts1) and for a "restricted power" (BZ3) state of charge,
- predetermines a nominal value of the charging voltage for engine load reduction, followed by the nominal value of the charging voltage for the normal charge level for a predetermined time period for the generator for a "powerful" (BZ2) state of charge and a temperature above the first temperature threshold value (Ts1),
- predetermines the nominal value of the charging voltage for engine load reduction over a predetermined time period, then a nominal value of the charging voltage for a reduced vehicle power supply system level, followed by a nominal value

of the charging voltage for the recuperation level for the generator for a "very powerful" state of charge (BZ1) and a temperature above the first temperature threshold value (Ts1) and below a second temperature threshold value (Ts2),

- predetermines the nominal value of the charging voltage for the normal charging level for an unlimited time for the generator for a "very powerful" (BZ1) state of charge and a temperature above the second temperature threshold value (Ts2).